

Claims

1. An ink residue calculating method comprising, in a method where the ink residue is calculated by obtaining ink discharge discharged from an ink container on the basis of the working time of an ink supply pump which sucks ink from the ink container and discharges the same and the ink discharge per unit working time of the ink supply pump or on the basis of the number of rotations of a drive motor of the ink supply pump and the ink discharge of the ink supply pump per unit rotation of the drive motor and cumulatively subtracting the ink discharge discharged from the ink container from the total ink volume accommodated in the ink container, the steps of

obtaining the kind of the ink,
correcting the ink discharge per unit working time of the ink supply pump or the ink discharge of the ink supply pump per unit rotation of the drive motor on the basis of the obtained kind of the ink, and calculating the ink residue on the basis of the corrected ink discharge.

2. An ink residue calculating method comprising, in a method where the ink residue is calculated by obtaining ink discharge discharged from an ink container on the basis of the working time of an ink supply pump which sucks ink from the ink container and discharges the same and the ink discharge per unit working time of the ink supply pump and cumulatively subtracting the ink discharge discharged from the ink container from the total ink volume accommodated in the ink container, the steps of

obtaining the working environmental temperature of the ink,
correcting the ink discharge per unit working time of the ink supply pump on the basis of the obtained working environmental temperature of the ink, and calculating the ink residue on the basis of the corrected ink discharge.

3. An ink residue calculating method as defined in Claim 2 in which the kind of the ink is obtained, the ink discharge per unit working time is corrected on the basis of the obtained kind of the ink and the working environmental temperature, and the ink residue

is calculated on the basis of the corrected ink discharge.

4. An ink residue calculating system comprising, in a system where the ink residue is calculated by obtaining ink discharge discharged from an ink container on the basis of the working time of an ink supply pump which sucks ink from the ink container and discharges the same and the ink discharge per unit working time of the ink supply pump or on the basis of the number of rotations of a drive motor of the ink supply pump and the ink discharge of the ink supply pump per unit rotation of the drive motor and cumulatively subtracting the ink discharge discharged from the ink container from the total ink volume accommodated in the ink container,

an ink kind obtaining means which obtains the kind of the ink, and

an ink residue calculating means which corrects the ink discharge per unit working time of the ink supply pump or the ink discharge of the ink supply pump per unit rotation of the drive motor on the basis of the kind of the ink obtained by the ink kind obtaining means, and calculates the ink residue on the basis of the corrected ink discharge.

5. An ink residue calculating system comprising, in a system where the ink residue is calculated by obtaining ink discharge discharged from an ink container on the basis of the working time of an ink supply pump which sucks ink from the ink container and discharges the same and the ink discharge per unit working time of the ink supply pump and cumulatively subtracting the ink discharge discharged from the ink container from the total ink volume accommodated in the ink container,

a temperature detecting means which detects the working environmental temperature of the ink, and

an ink residue calculating means which corrects the ink discharge per unit working time of the ink supply pump on the basis of the working environmental temperature of the ink obtained by the temperature detecting means, and calculates the ink residue on the basis of the corrected ink discharge.

6. An ink residue calculating system as defined in Claim 5

further comprising an ink kind obtaining means which obtains the kind of the ink, wherein

the ink residue calculating means corrects the ink discharge per unit working time on the basis of the kind of the ink obtained
5 by the ink kind obtaining means and the working environmental temperature, and calculates the ink residue on the basis of the corrected ink discharge.

7. An ink container which is used for carrying out the ink residue calculating method defined in Claim 1 or 3 comprising a
10 storage means which stores kind data according to the kind of the ink.

8. An ink container which is used for carrying out the ink residue calculating method defined in Claim 1 comprising a storage
15 means which stores a parameter used in the correction based on the kind of the ink.

9. An ink container which is used for carrying out the ink residue calculating method defined in Claim 2 comprising a storage
means which stores a parameter used in the correction based on the working environmental temperature of the ink.

20 10. An ink container which is used for carrying out the ink residue calculating method defined in Claim 3 comprising a storage means which stores a parameter used in the correction based on the kind of the ink and the working environmental temperature of the ink.